

REMARKS

The Examiner is thanked for the thorough review and consideration of the present application. The Office Action dated January 26, 2005 has been received and its content carefully reviewed.

By this Response, claims 4, 17 and 21-22 have been amended, and claim 20 has been cancelled without prejudice or disclaimer. No new matter has been added. Claims 2-19 and 21-40 are pending in the application with claims 11, 19 and 35-40 being withdrawn from consideration. Reconsideration and withdrawal of the rejections in view of the above amendments and the following remarks are respectfully requested.

In the Office Action, claims 2, 4, 5, 7, 10, 12, 17, 18 and 33 are rejected under 35 U.S. C. § 103(a) as being unpatentable over Applicant's alleged admitted prior art (APA) in view of U.S. Patent No. 6,362,858, issued to Jeon et al. (hereafter "Jeon") and further in view of U.S. Patent No. 6,300,995, issued to Wakagi et al. (hereafter "Wakagi"). Applicant respectfully traverses the rejection because neither APA, Jeon nor Wakagi, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. For example, APA, Jeon and Wakagi fail to teach or suggest an in-plane switching liquid crystal display device that includes, among other features, "a storage electrode over the common line, wherein the storage electrode contacts the second connecting line via a storage contact hole" as recited in independent claim 4. Because neither APA, Jeon, nor Wakagi teach or suggest at least this feature of independent claim 4, claim 4 and its dependent claims 2, 5, 7, 10 and 12 are allowable over any combination of APA, Jeon and Wakagi.

Independent claim 17 is allowable over APA, Jeon and Wakagi because APA, Jeon and Wakagi fail to teach or suggest an in-plane switching liquid crystal display device (LCD) that includes, among other features, "a storage electrode over the common line, wherein the storage electrode contacts the second connecting line". Accordingly, independent claim 17 and its dependent claims 18 and 33 are allowable over any combination of APA, Jeon and Wakagi.

Reconsideration and withdrawal of the rejection of claims 2, 4, 5, 7, 10, 12, 17 and 18 are respectfully requested.

In the Office Action, claims 13-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Jeon and Wakagi in view of U.S. Patent No. 6,323,918, issued to Yoshioka et al. (hereafter "Yoshioka"). Applicant respectfully traverses the rejection

because neither APA, Jeon, Wakagi nor Yoshioka, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. In particular, APA, Jeon, Wakagi and Yoshioka fail to teach or suggest an in-plane switching liquid crystal display device that includes, among other features, “a storage electrode over the common line, wherein the storage electrode contacts the second connecting line via a storage contact hole” as recited in independent claim 4, from which claims 13-15 depend.

Yoshioka discloses a liquid crystal display device having a structure of a multigate thin film transistor (TFT) (col. 1, lines 1-3). However, Yoshioka fails to teach or suggest at least the above feature of independent claim 4. Thus, one of ordinary skill in the art would not be motivated by the teachings of Yoshioka to modify the device of APA, Jeon and Wakagi to obtain an in plane switching liquid crystal display device having the combined features in independent 4. As such, rejected claims 13-15, by virtue of their dependence from claim 4, are allowable over any combination of APA, Jeon, Wakagi and Yoshioka.

Reconsideration and withdrawal of the rejection of claims 13-15 are respectfully requested.

In the Office Action, claims 3, 6, and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Jeon and Wakagi in view of U.S. Patent No. 6,278,502, issued to Colgan et al. (hereafter “Colgan”). Applicant respectfully traverses the rejection of dependent claims 3, 6 and 34 because neither APA, Jeon, Wakagi nor Colgan, analyzed alone or in any combination, teaches or suggests the combined features recited in independent claims 4 and 17 of the present application. Specifically, APA, Jeon, Wakagi and Colgan fail to teach or suggest “a storage electrode over the common line, wherein the storage electrode contacts the second connecting line via a storage contact hole” as recited in independent claim 4, from which claims 3 and 6 depend. And, APA, Jeon, Wakagi and Colgan fail to teach or suggest “a storage electrode over the common line, wherein the storage electrode contacts the second connecting line” as recited in independent claim 17, from which claim 34 depends.

The Office Action concedes that APA, Jeon and Wakagi fail to teach all the features of the recited invention, and relies upon the teachings of Colgan to remedy the deficient teachings of the combination of APA, Jeon and Wakagi. However, Applicant submits Colgan fails to teach the features discussed above with respect to independent claims 4 and 17 that would remedy the deficient teachings of APA, Jeon and Wakagi. Accordingly, one of ordinary skill in

the art would not be motivated by the teachings of Colgan to modify the LCD of APA by the teachings of Jeon and Wakagi to provide a device having the combined features recited in independent claims 4 and 17 of the present application. Thus, rejected claims 3, 6 and 34 are allowable over any combination of APA, Jeon, Wakagi and Colgan. Reconsideration and withdrawal of the rejection of claims 3, 6 and 34 are respectfully requested.

In the Office Action, claims 8, 9 and 32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Jeon and Wakagi in view of U.S. Publication No. 2002/0008824, issued to Son et al. (hereafter "Son"). Applicant respectfully traverses the rejection because neither APA, Jeon, Wakagi nor Son, analyzed alone or in any combination, teaches or suggests "a storage electrode over the common line, wherein the storage electrode contacts the second connecting line via a storage contact hole" as recited in independent claim 4, from which claims 8 and 9 depend. And, APA, Jeon, Wakagi and Son fail to teach or suggest "a storage electrode over the common line, wherein the storage electrode contacts the second connecting line" as recited in independent claim 17, from which claim 32 depends.

The Office Action relies upon the teachings of Son to remedy the deficient teachings of APA, Jeon and Wakagi. However, Son, which discloses an in-plane switching mode liquid crystal display device "that prevents or minimizes the formation of static electricity" (see paragraph [0015], fails to teach or suggest the combined features recited in claims 4 and 17 that would remedy the deficient teachings of APA, Jeon and Wakagi. Accordingly, claims 8, 9 and 32, by virtue of their dependence from claims 4 and 17, are allowable over any combination of APA, Jeon, Wakagi and Son. Reconsideration and withdrawal of the rejection are requested.

In the Office Action, claims 23-25 and 27-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Jeon and Wakagi in view of U.S. Patent No. 6,219,125, issued to Ishikura et al. (hereafter "Ishikura"). Applicant respectfully traverses the rejection because neither APA, Jeon, Wakagi nor Ishikura, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. Specifically, APA, Jeon, Wakagi, and Ishikura fail to teach or suggest "a storage electrode over the common line, wherein the storage electrode contacts the second connecting line" as recited in independent claim 17.

The Office Action relies upon Ishikura to remedy the deficient teachings of APA, Jeon and Wakagi. Applicant submits Ishikura discloses "an electrode plate capable of improving

adhesive properties (adhesiveness) between metal (first) electrodes and a substrate having thereon the metal electrodes while suppressing an oxidation of the metal electrodes and capable of providing stable electrical conduction of the metal electrodes to transparent (second) electrodes formed thereon” (col. 1, line 65 - col. 2, line 4). However, Ishikura fails to teach or suggest at least the above feature of claim 17 that would motivate one of ordinary skill in the art to modify the device of APA by the teachings of Jeon and Wakagi to obtain a device having all the combined features recited in claim 17 of the present application. Accordingly, claims 23-25 and 27-30, by virtue of their dependence from independent claim 17, are allowable over any combination of APA, Jeon, Wakagi and Ishikura. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action, claim 26 is rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Jeon, Wakagi and Choi in view of Colgan. Applicant respectfully traverses the rejection because neither APA, Jeon, Wakagi, Choi nor Colgan, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. Choi discloses an IPS mode thin film transistor-LCD in which cross-talk is decrease by preventing the electric signal through a data electrode from affecting a pixel electrode.” Applicant respectfully submits Choi fails to teach or suggest “a storage electrode over the common line, wherein the storage electrode contacts the second connecting line” as recited in independent claim 17, from which claim 26 depends.

Because Choi fails to teach or suggest at least the above feature of claim 17, one of ordinary skill in the art would not be motivated by the teachings of Choi to modify the device of APA, Jeon, Wakagi and Colgan to obtain a device having the combined features recited in independent claim 17. Accordingly, claim 17 and its dependent claim 26 are allowable over any combination of APA, Jeon, Wakagi , and Colgan. Reconsideration and withdrawal of the rejection of claim 26 are respectfully requested.

In the Office Action, claim 31 is rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Jeon, Wakagi and Ishikura and further in view of Colgan. Applicant respectfully traverses the rejection because neither APA, Jeon, Wakagi, Ishikura nor Colgan, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. Specifically, APA, Jeon, Wakagi, Ishikura and Colgan fail to teach or suggest “a storage electrode over the common line, wherein the storage electrode

contacts the second connecting line” as recited in independent claim 17, from which claim 31 depends. Because APA, Jeon, Wakagi, Ishikura and Colgan fail to teach or suggest at least this feature of claim 17, claim 17 and its dependent claim 31 are allowable over any combination of APA, Jeon, Wakagi, Ishikura and Colgan. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action, claims 20-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Jeon and Wakagi in view of U.S. Patent No. 6,094,250, issued to Choi et al. (hereafter “Choi”). Claim 20 has been cancelled without prejudice or disclaimer of the subject matter recited therein. Applicant respectfully traverses the rejection because neither APA, Jeon, Wakagi nor Choi, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. Specifically, APA, Jeon, Wakagi, and Choi fail to teach or suggest “a storage electrode over the common line, wherein the storage electrode contacts the second connecting line” as recited in independent claim 17, from which claims 21 and 22 depend. Because APA, Jeon, Wakagi and Choi fail to teach or suggest at least this feature of independent claim 17, claim 17 and its dependent claims 21 and 22 are allowable over any combination of APA, Jeon, Wakagi and Choi. Reconsideration and withdrawal of the rejection are respectfully requested.

In the Office Action, claim 16 is rejected under 35 U.S.C. § 103(a) as being unpatentable over APA, Jeon, Wakagi Yoshioka, Shin and U.S. Patent No. 6,049,365, issued to Nakashima. Applicant respectfully traverses the rejection because neither APA, Jeon, Wakagi, Yoshioka, Shin nor Nakashima, analyzed alone or in any combination, teaches or suggests the combined features recited in the claims of the present application. Specifically, APA, Jeon, Wakagi, Yoshioka, Shin and Nakashima fail to teach or suggest “a storage electrode over the common line, wherein the storage electrode contacts the second connecting line via a storage contact hole” as recited in independent claim 4.

The Office Action relies upon the teachings of Nakashima to remedy the deficient teachings of Jeon, Wakagi Yoshioka and Shin. Applicant submits Nakashima discloses various embodiments of a liquid crystal display device including an in-plane switching mode liquid crystal display apparatus of a second embodiment (col. 7, lines 8-43 and claim 4) in which a transparent conductive film 54 may be used as the material of the pixel electrode. However, Nakashima fails to teach or suggest at least the above features of claim 4 that would remedy the

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deficient teachings of Jeon, Wakagi, Yoshioka and Shin. Accordingly, no combination of Jeon, Wakagi, Yoshioka, Shin and Nakashima would provide a device having the combined features recited in independent claim 4. As such, claim 4 and its dependent claim 16 are allowable over any combination of Jeon, Wakagi, Yoshioka, Shin and Nakashima. Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections of the claims and pass this application to issue. If the Examiner deems that a telephone conversation would further the prosecution of this application, the Examiner is invited to call the undersigned at (202) 496-7500.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. A duplicate copy of this sheet is enclosed.

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